

A CATALOG
OF
Foundry Sands, Clays
AND
GRAVELS



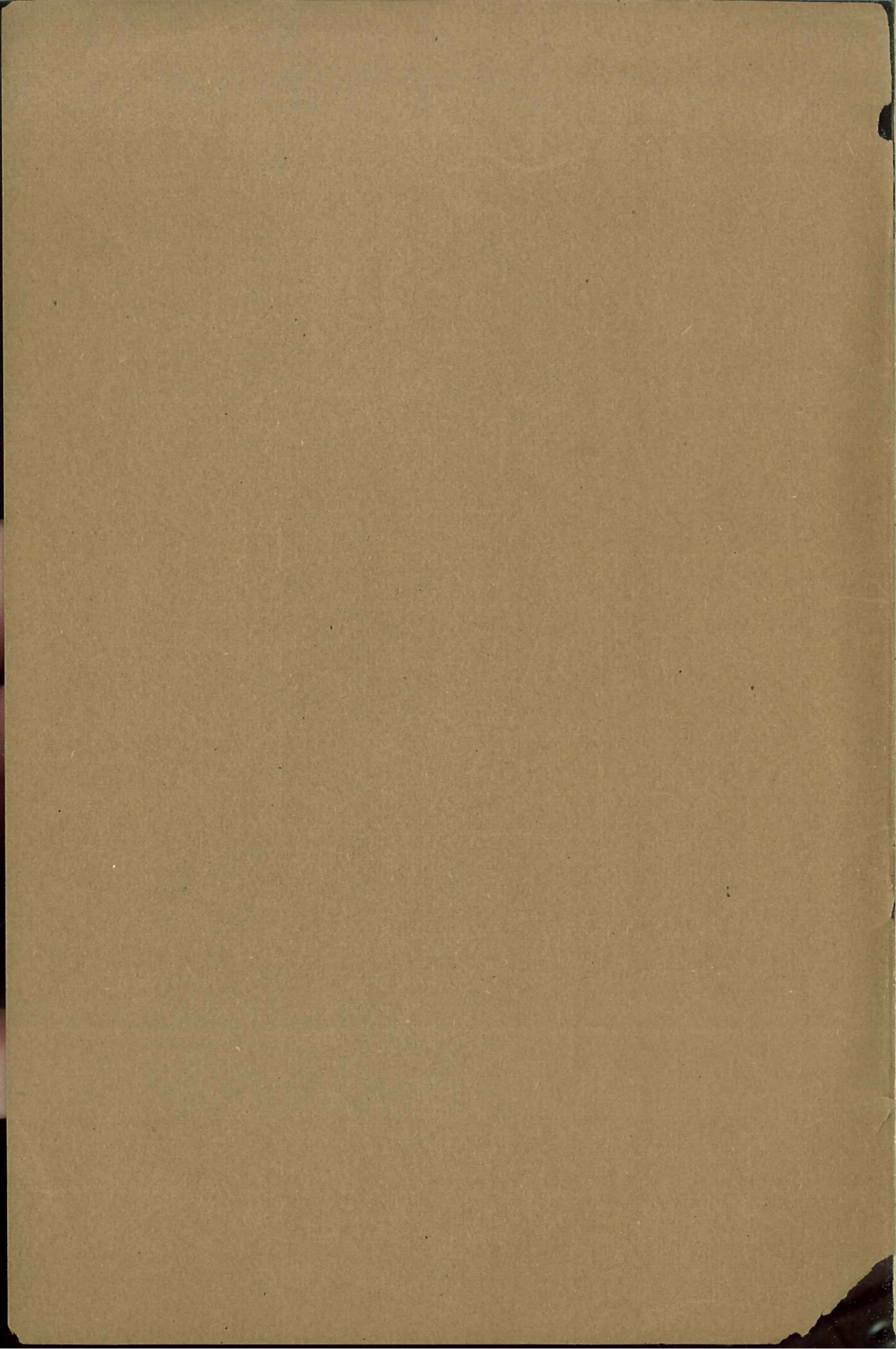
Whitehead Brothers Company



BUFFALO

NEW YORK

PROVIDENCE



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AND
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Introduction



We present this catalog with the hope that it may be of assistance to the foundryman in selecting his raw materials. In order not to be confusing, we have made it concise, giving only a short description of each class of material, its uses, the locality where it originates and the grades in which it is shipped.

In this list we have embodied materials only from those territories in which we have been producing for a great many years. In these fields our deposits of raw materials, loading equipment and long experience give us facilities for service which are absolutely unique and unequalled. Our superintendents of shipping are almost without exception men of life-long experience in our work, and to their careful and intelligent supervision of the material as it is being loaded we owe much of our success.

Our sales organization, in intimate touch with our shipping points, and trained by past experience in the uses of each deposit of Sand, is of great aid to the foundryman in making a careful and intelligent selection of raw materials for the work at hand. **The unparalleled extent of our deposits insures the customer a permanent supply of exactly the same grade, and our large equipment allows us to make prompt shipment at all seasons of the year, except at times in the dead of winter when unusually severe weather conditions make it impractical to load these products.**

We appeal to the foundry aiming to turn out a high class of castings, and to the one seeking to turn out a large tonnage at the lowest possible cost. For either of these shops to reach the highest degree of efficiency we believe a supply of the highest grade raw material obtainable is indispensable.

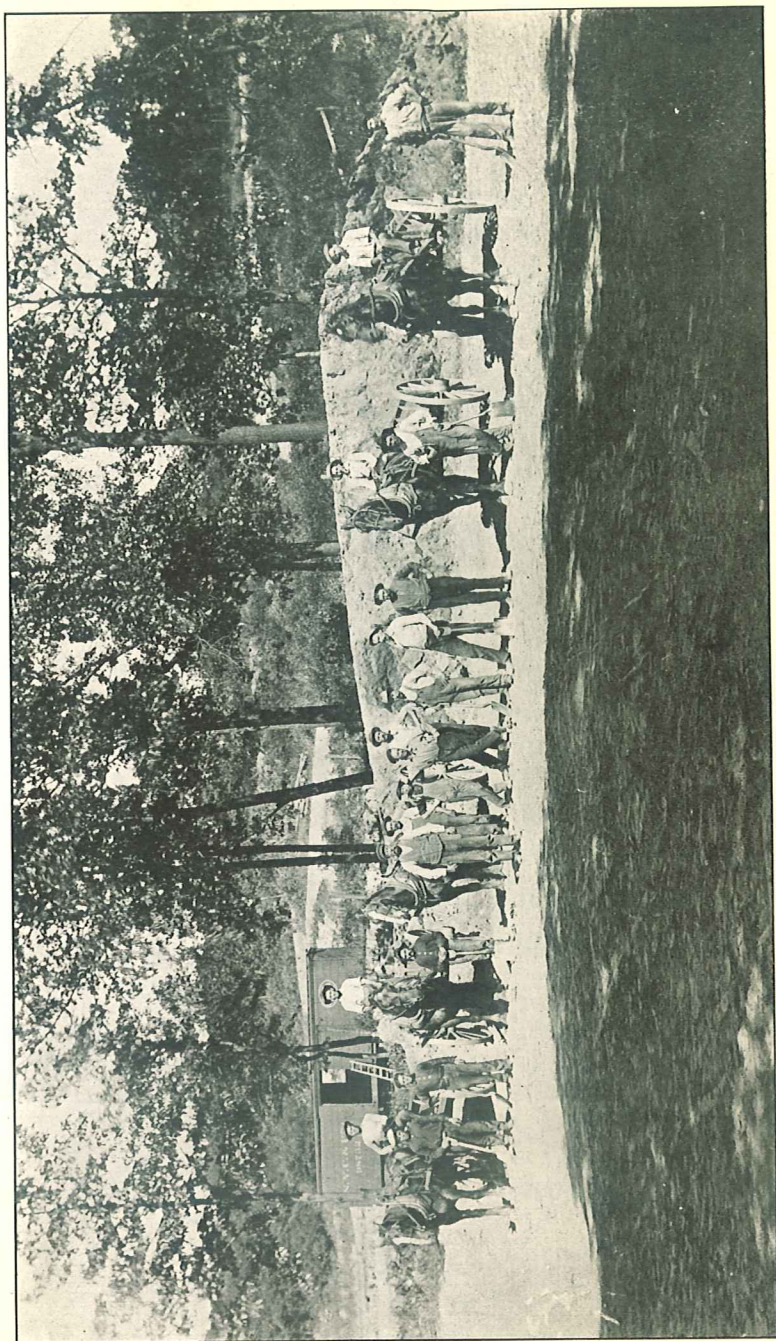
Albany and North River Moulding Sand

As the pioneer shippers of these now long-famous materials, it is with great pleasure that we turn to the consideration of Albany and North River Sands. Years ago, our Company, whose operations up to that time had been confined to New Jersey materials, became interested in the Eastern New York State deposits and after careful investigation installed shipping points at several places in the Albany and North River territories. So wisely did they make their selections, and so extensive and continuous have been the purchases since that time, that our company has not only succeeded in increasing the lead gained by being the first in the field, but it now occupies the unique position of owning and operating a network of banks extending from Saratoga County in the north to the southern boundary of Dutchess County in the south, from which we load and ship Sand from thirty-nine different points, **every pound of it dug by our own workmen, hauled by our own horses, and loaded under the direct supervision of our own shipping foremen.**

GRADES

These Sands run in grade from "OO" for the very lightest aluminum and brass, to "4" for heavy machinery castings. For all grades of foundry work from the very lightest to heavyweight machinery castings, the Albany and North River Sands have a reputation which is national in scope. For the manufacture of stove plate, locks, hardware, ornamental iron, bathtubs, and other enameled ware, the use of Albany or North River Sand is almost imperative if the highest efficiency is to be obtained. Even though the first cost of this material be much greater than that of other local Sands, experience has shown many of our largest and most successful firms that this first cost is insignificant as compared with the ultimate saving effected by the use of this material. The reasons for its superiority, besides its uniformity and cleanness, are:—

It receives more bond from a stated percentage of loam than any other Sand on the market. Grade and bond being equal, it has a greater degree of permeability than other Sands. Grade and bond being equal, it is much more refractory than other Sands. We have explained and amplified these statements to some extent in our booklet "Whitehead's Albany Sand for Stove Plate and Light Grey Iron Castings," which we will be pleased to forward to you on request.



ONE OF OUR ALBANY TERRITORY WORKS

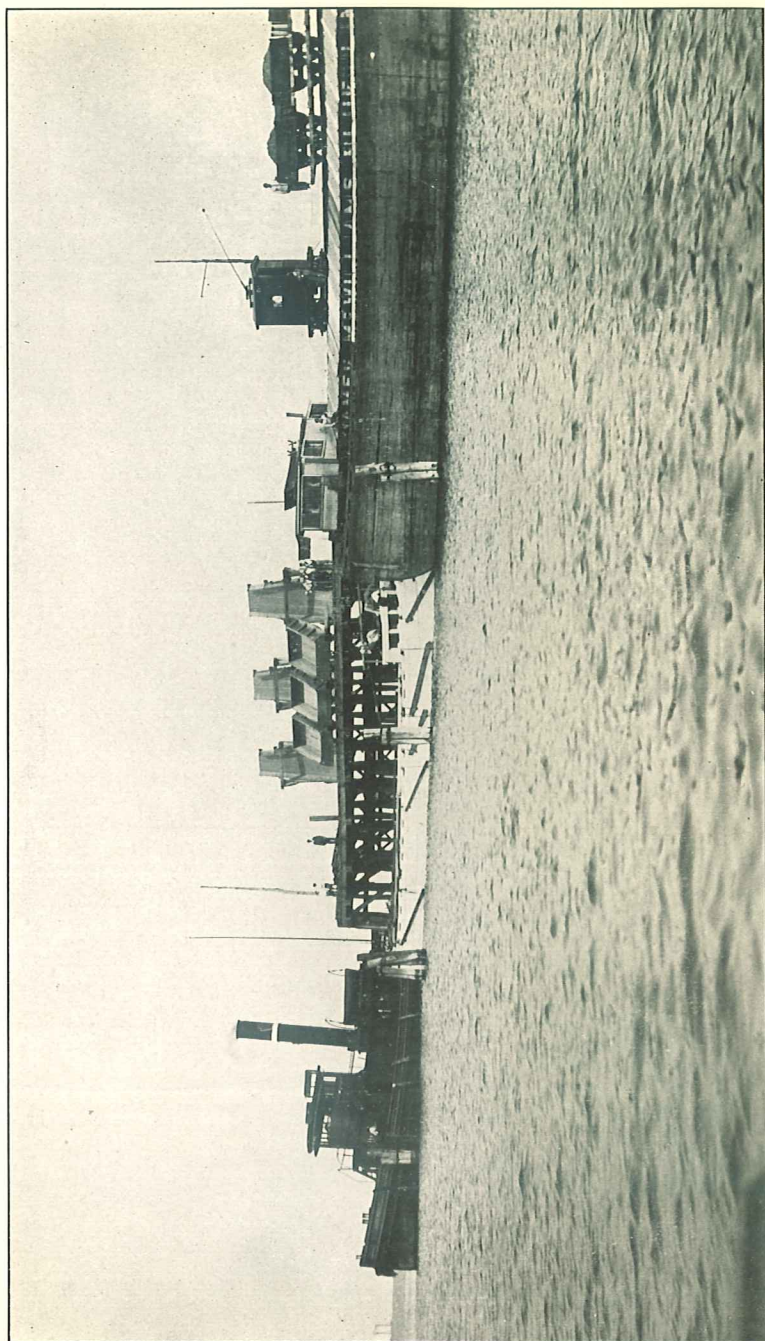
Jersey Moulding Sand

This material, sometimes called "Amboy" Sand, loads in boats or cars in the vicinity of South Amboy, N. J. It runs from a "No. 2" up to a coarse "No. 4," and has very strong body. The finer grades are adapted for light and medium machinery and general jobbing work, the coarse "No. 4," a very strong, sticky Sand, is unequalled for heavy machinery castings, either Green Sand, Dry Sand, or Loam. In Dry Sand and Loam work Jersey Fire Sand is often mixed with this coarse "No. 4," making a strong, open and very refractory mixture, absolutely the best in the East for Dry Sand and Loam, and very satisfactory for daubing ladles and cupola.

Jersey Fire Sand

We own and operate several extensive deposits of this material, the only true Fire Sand banks in the State of New Jersey. We load this material fine, medium, or coarse in grade, and clean, rich, or sticky, as desired by the customer.

This Fire Sand has been conceded for years to be absolutely the most refractory Sand obtainable for foundry use. It is the chief element in the large cores in many Eastern and Middle West shops and when mixed with Jersey Moulding Sand or any other strong Sand, it makes a dry Sand or loam mixture that cannot be equalled for porosity and is almost impervious to fire. This same mixture is also extensively used for patching the cupola and daubing ladles.

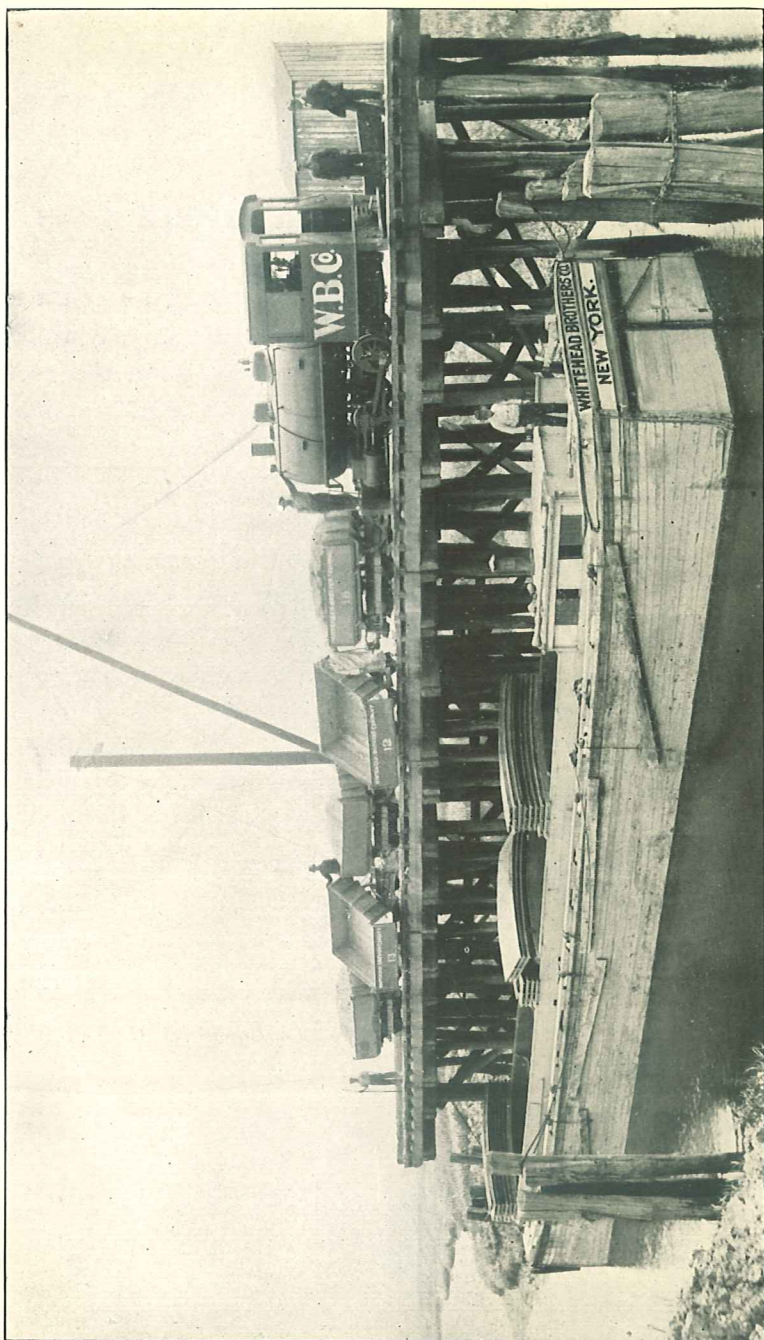


LOADING JERSEY MOULDING SAND

Jersey Fire Clay and Kaolin

The refractory and plastic properties of Jersey Fire Clay are too well known to require much description. Jersey Kaolin is a whitish, sandy Clay and for foundry purposes it is practically interchangeable with Jersey Fire Clay. Both the Clay and Kaolin should be mixed with Sand-Fire Sand, Silica Sand, or Moulding Sand,—the preference being indicated by the order mentioned, before using as a daub. The Clay and Kaolin are shipped in the crude state. When Sands are not mixed by machine, the simplest way of preparing the daub is to throw the Fire Clay or Kaolin and Sand, sufficient for the next day's daubing, into a vat and cover with water, allowing to soak overnight. In the morning a small amount of stirring with a hoe or some similar instrument will put the daub in good condition for use. About two parts Sand to one of Clay or Kaolin will usually be found to be the right proportion, but of course this can be varied to meet different conditions. Where the mixing is done in this way, by hand, the Kaolin will perhaps be found easier to work than the Clay, but where mixing is done by machinery we recommend the Clay, as it is more plastic than the Kaolin. They are equally refractory.

For foundry use we ship Jersey Fire Clay in three grades as follows: "Red and White mixed," or "Spotted" Clay; "Buff and Blue" Clay; and "Blue" or "Amboy" Clay.



LOADING JERSEY FIRE SAND

Special Clays

For manufacture of fire brick, pottery, tile, etc., we have special Clays, some shipped in a crude state, some ground and dried. Will be pleased to submit samples on request.

Cupola Daubs

From our North Jersey works we ship a mixture of Fire Clay, Kaolin and Fire Sand which we term "Regular Cupola Daub." It can be mixed with moulding Sand or Bank Sand, and makes an effective and inexpensive daub.

Jersey Fire Clay and Kaolin are both very extensively used for daubing, being mixed with Fire Sand, Bank Sand or Moulding Sand. The Jersey Clay or Kaolin being very plastic will carry twice its bulk in Sand or more, depending upon how strong a mixture is desired. We also ship from our North Jersey works a strong loam for daubing. It is almost pure Alumina and is easily mixed with either Jersey Fire Sand or other Silica Sand. This loamy daub does not have to be soaked before mixing, and when mixed half and half with Jersey Fire Sand it makes a very effective daub, and one that scales the cupola easily.

Steel Moulding and Core Sand

This material we ship from five different banks all in the vicinity of South River, Middlesex County, N. J. Owing to our large equipment we can make prompt shipment during the season, in either boats or cars. These Sands are high in Silica, long lived, clean and uniform.

On request, any carload user will be supplied with a sample barrel free of charge except the freight.

Sticky Silica Sand

This is a Steel Moulding Sand, mined in South Jersey. It is a medium coarse Silica Sand, with a strong natural bond, thoroughly mixed by nature. Many steel foundries find that by using this Sand as a facing on their heavy or most particular castings they get a cleaner job with less cutting and burning on.

Millville and Jersey Gravels

These Gravels originate in the southern part of New Jersey and are much used in large Cores and Dry Sand and Loam moulding. They are coarse and very strong, and, while they do not offer quite the resistance to fire that the Jersey Fire Sand and Moulding Sand mixture does, are very satisfactory and considerably used. We have unsurpassed facilities for shipping these materials, and every pound of our Gravel is power screened, which removes the large stones and saves the foundryman considerable waste.

Lumberton Moulding Sand

This is another South Jersey material. It is an extremely strong Moulding Sand, loading coarse, medium and fine. It is very well adapted for car wheel and machinery castings.

Sand Blast Sand

For cleaning castings, sheet metal, stone buildings, etc., by means of the Sand Blast, we ship a prepared Sand which is exactly suited to the requirements of the work. It is a milled inland water Sand, from which everything has been washed except the Silica, and it is exceptionally clean, hard and sharp. It is power washed and screened, and shipped bone dry, so no preparation is needed before using.

This material we ship in fine, medium and coarse grades, samples of which we are always pleased to forward.

French Sand

We are the largest importers of French Sand in the United States and sell it in the original import casks, weighing about 800 pounds each. This is a fine Sand, very strong in bond, which is used extensively in the manufacture of bronze statuary. It is also used as a Facing Sand in light, particular castings in brass and allied metals. It is so strong that it is inclined to lump up, and for best results it should be ground or rolled before using. This can be done either by machine or by hand, the former method, of course, being much quicker and more satisfactory. It is much used also in gold and silver castings by all the well-known precious metal workers.

The most useful quality of French Sand is its ability to withstand the action of molten metal without cutting, even when the Sand is in a very thin section. The face of the mould is reproduced in sharp relief.

Pattern and Facing Sands

For facing particular brass, aluminum, ornamental iron work, etc., we have several special fine, strong Sands which we carry in stock and ship in barrels from our different warehouses.

Samples and prices on request.

Windsor Locks Sand

This is a very fine, extremely strong, soft, velvety facing Sand, reddish brown in color, and almost like flour to the touch. It is both finer and stronger than French Sand but has not got its ability to withstand the cutting of the metal, and must be used very carefully to avoid making the mould too close.

This material we ship in carloads direct from the bank in New England and in 350-pound barrels from our several warehouses.

Wareham Fire Sand

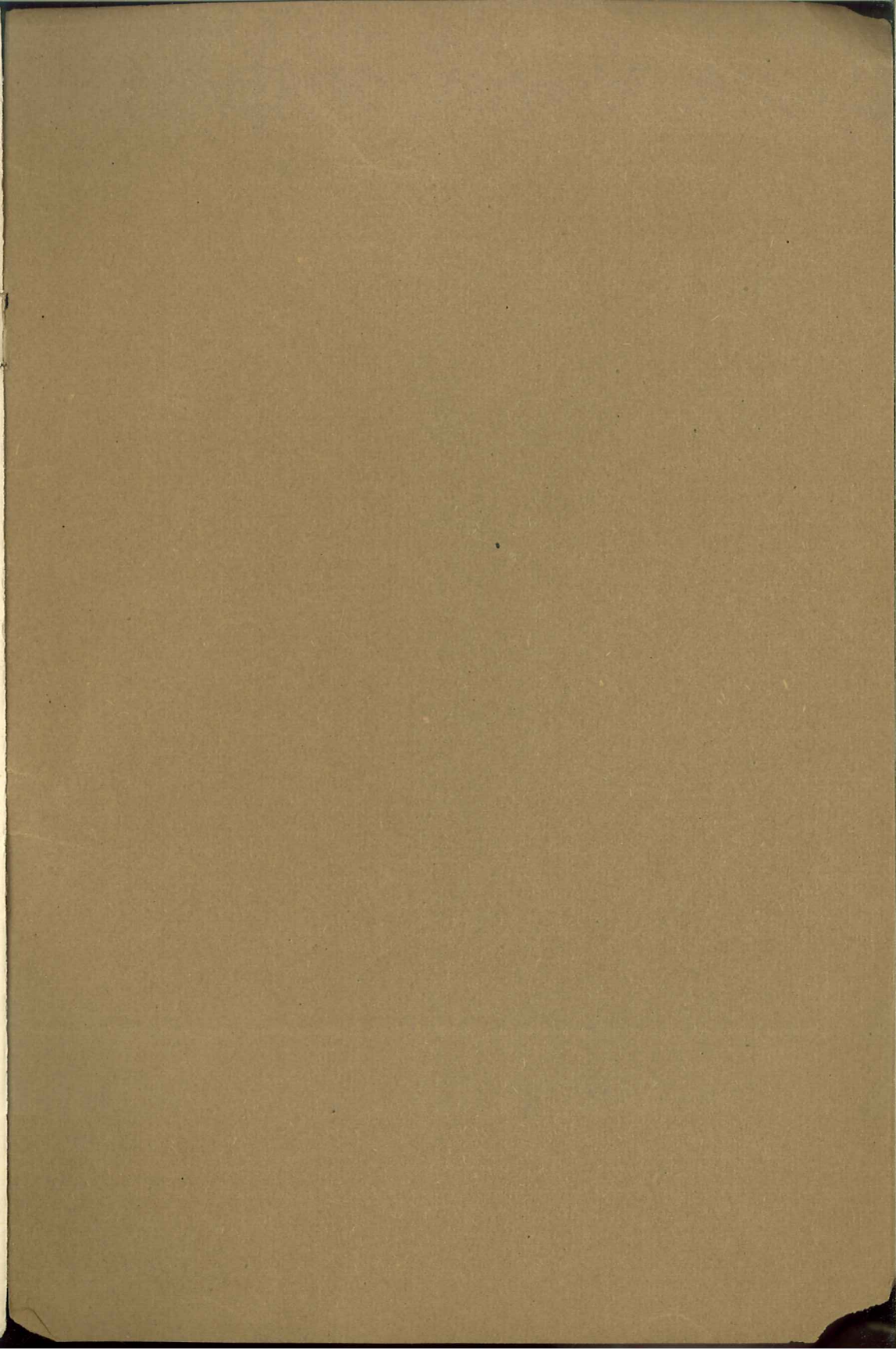
Wareham Fire Sand is the best Sand for furnace bottom purposes produced. It is highly refractory and is extensively used by rolling mills throughout this country and abroad. This material is dug from our special bank on Cape Cod, Massachusetts, for either rail or water shipment.

Providence River Core Sand

A very fine, even-grained core Sand, especially adapted to light hardware castings where a strong but porous core is desired. Pronounced by experts as one of the best Sands produced for core purposes after comparative tests with various other Sands.

We Operate Plants at the Following Points :

Albany, N. Y.	Selkirk, N. Y.
Beaver Dam, N. Y.	Stuyvesant, N. Y.
Buffalo, N. Y.	Schenectady, N. Y.
Clinton Point, N. Y.	Schuylerville, N. Y.
Coxsackie, N. Y.	Ushers, N. Y.
Castleton, N. Y.	Van Hoesens, N. Y.
Carman, N. Y.	Visher's Ferry, N. Y.
Cramers Bridge, N. Y.	Whiteheads' Point, N. Y.
Cedar Hill, N. Y.	Wemple, N. Y.
Crescent, N. Y.	West Albany, N. Y.
Coeymans, N. Y.	Waterford, N. Y.
Coons, N. Y.	Willow Springs, N. Y.
Camelot, N. Y.	West Waterford, N. Y.
Delmar, N. Y.	Lumberton, N. J.
Eatons Neck, N. Y.	Millville, N. J.
Elnora, N. Y.	Masonville, N. J.
Fishkill, N. Y.	Raritan River, N. J.
Four Mile Point, N. Y.	Rockaway, N. J.
Glenmont, N. Y.	South River, N. J.
Galudets Point, N. Y.	South Amboy, N. J.
Hotalling, N. Y.	Sayreville, N. J.
Mechanicsville, N. Y.	South Vineland, N. J.
Newton Hook, N. Y.	Whitehead's, N. J.
North Albany, N. Y.	Providence, R. I.
Niskayuna, N. Y.	East Wareham, Mass.
New Hamburg, N. Y.	Irwin, Pa.
Poughkeepsie, N. Y.	



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